

REMARKS

Basis for the amendment to claim 1 may be found in original claim 3 for the factor of 1000 and at page 10 Sample A and previous claim 3 for the resistivity insertion. It is respectfully urged that the amendment to claim 1 does not raise any new issues. The rearrangement of language regarding resistivity makes the claim clearer and the insertion of claim 3 into claim 1 sets forth a much larger difference in resistivity after printing than is achieved by the process of the Examples of Lamotte et al.

The courteous interview between the undersigned, Examiner Zacharia, and inventor Charles Anderson is gratefully acknowledged. In the interview the Reference to Lamotte was described and discussed. The applicants urged that it did not disclose printing on an electroconductive layer to decrease resistivity in the printed area by 1000 times. Examiner Zacharia indicated that he would consider the argument and further review the reference to Lamotte when the response was filed. No agreement as to further treatment of this application was reached.

Claims 1-8, 10-23, 25, 28, 29, 31-35 and 41 stand rejected under 35 USC 102 as being anticipated by Lamotte et al. Lamotte is stated to teach a material having a conductive pattern comprising a substrate and a conductive element formed of conductive polymer and a polyanion contiguous with a patterned surface of at least two types of surface element wherein the conductive element in contact with one of the surface elements results in a conductivity that is lower by a factor of 10. The Examiner notes that the conductive polymer may be a polythiophene. The Examiner states that the pattern surface elements can be applied by conventional printing techniques such as screenprinting and offset printing. The conductivity of the conductor of element may be lowered to less than $10^6 \Omega$ by a conductivity enhancement process. The Examiner states that the conductivity of the conductor of element is lower than $10^4 \Omega$ in the embodiment of example 3 and that the conductivity enhancement process can comprise contacting the conductive polymer with a liquid subsequent to preparation of the conduct of polymer layer. This rejection is respectfully traversed.

The instant invention claims a layer of conductive polymer that has areas that have been printed with a conductivity enhancing agent. The printed areas have decreased resistivity by a factor of at least 1000 over not printed areas. Lamotte never overprints a layer to form a pattern of lower resistivity. Lamotte uses surface treatment to form surface patterns type A and type B on a support. The conductive layer is applied onto the preformed surface pattern. There is no printing of conductivity enhancing fluid onto areas of a conductive layer disclosed by Lamotte. Therefore, Lamotte does not anticipate the invention and reconsideration of the rejection is respectfully requested.

Claim 24 stands rejected under 35 USC 103 as being unpatentable over Lamotte et al. Lamotte is stated to teach all limitations of claim 24 as above except the amount of binder used. The Examiner states that the amount of binder used impacts the integrity of the resulting film and dilutes the amount of conductive polymer in the layer. The Examiner states therefore the amount of binder results in an effective variable that affects the conductivity of the resulting layer and that it would have been obvious to one of ordinary skill at the time of the invention to optimize the amount of binder used. This rejection is respectfully traversed.

As urged above, Lamotte does not disclose the elements of claim 1, much less the elements of claim 20 upon which claim 24 depends. Lamotte never prints on a layer to form areas of 1000 times lower resistivity. Lamotte shows treatments on the substrate prior to coating or applying conductive material. There is no disclosure or suggestion in Lamotte of an article formed that corresponds to the claimed article comprising printed areas of a conductive layer contacted with a conductivity enhancing fluid to decrease conductivity of areas of the conductive layer. Therefore, it would not be obvious to select the range of materials as set forth in claim 24 as the article of the independent claim is not disclosed by Lamotte et al.

Claims 26, 27 and 30 stand rejected, in paragraph 4 of the Office Action under 35 USC 103 as being unpatentable over Lamotte et al in view of Lelantal et al (247). Lamotte is stated by the Examiner to teach all limitations of claims 26, 27 and 30 as outlined in paragraphs 2 and 3 except for the use of materials as recited in these claims for the binder. Lelantal is stated by the Examiner to teach polymers that are the functional equivalents of the

polythiophenes and it would be obvious to one of ordinary skill in the art to substitute for the Lamotte polymer. This rejection is respectfully traversed. As urged above, Lamotte does not disclose the article of the broadest claims of the instant invention. Therefore, even assuming there is a teaching to somehow substitute the polymers of Lelantal into Lamotte there is no teaching in either reference, in any combination, that would overcome the failure of Lamotte to disclose the article of claim 1. Therefore, it is respectfully requested that the rejection over Lamotte in view of Lelantal be reconsidered and withdrawn.

In paragraph 5 the Examiner responds to the applicant's arguments. The Examiner states that the applicants urged that Lamotte does not disclose the formation of a continuous layer that is then contacted with a conductivity enhancing agent to create a pattern having lower resistivity. The Examiner states this is not persuasive because it is noted that the features on which the applicant relies e.g. a continuous layer with patterned conductivity enhancing agent applied are not recited in the rejected claims. The applicant regrets not using the exact language of the claims in making the argument. The claim only refers to a "layer" not a continuous layer and the claim has a "pattern of printing solution containing a conductivity enhancing agent" rather than the simpler language argued by the applicant. The undersigned has attempted to use language more consistent with the claims in this response. Nevertheless, there is no disclosure in Lamotte of an electroconductive layer with a "pattern of a printing solution containing a conductivity enhancing agent in contact with said electroconductive layer" as is claimed in the instant invention.

Therefore, it is respectfully requested that the rejections under 35 USC 102 and 35 USC 103 be reconsidered and withdrawn and that an early Notice of Allowance be issued in this application.

Respectfully submitted,



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